

Claims

What is claimed is:

1. A stent for delivery of a drug, comprising:
a stent body capable of heating by exposure to an electromagnetic field; and
a layer of drug material applied to the stent body, said drug material being
substantially effective only when the stent has been heated by exposure to the electromagnetic
field and heat energy from the stent has heated the drug material.
2. The stent of claim 1, wherein the drug material is a drug ingredient combined with a
heat sensitive release material, and the drug material becomes effective after the release
material releases a portion of the drug ingredient.
3. The stent of claim 1, wherein the drug material is a drug ingredient adhered to the stent
that is substantially inactive at normal body temperature and that becomes active after the
stent has heated the drug ingredient to a temperature where is substantially active.
4. The stent of claim 1, wherein the drug material is a drug ingredient that is to be
delivered to tissue adjacent the stent and drug-tissue interaction is enhanced when heat from
the stent causes tissue adjacent the stent to rise above normal body temperature when the drug
ingredient is present.
5. The stent of claim 1, wherein the drug material comprises an active ingredient that
inhibits restenosis in the stent.

6. A method of using a drug-coated or drug-loaded stent by heating the stent above a certain temperature at which drug activity in the tissue adjacent the stent starts and maintaining that temperature for a specified period of time.
7. The method of claim 6, wherein the stent is heated by radio frequency (RF) energy.
8. The method as recited in claim 6, wherein the RF energy is generated by a sending antenna outside the patient's body transferring energy to the stent.
9. A method as cited in claim 6, wherein a sending antenna is placed inside the stent by an endovascular catheter inserted through vessels.
10. A method as recited in claim 6, wherein the drug activity is inhibiting proliferation of cells that cause restenosis.
11. A stent for delivery of a drug, comprising:
 - a stent body capable of heating by exposure to an electromagnetic field; and
 - a layer of drug material applied to the stent body, said drug material being substantially ineffective after the stent has been heated by exposure to the electromagnetic field and heat energy from the stent has heated the drug material.
12. The stent of claim 11, wherein the drug material is a drug ingredient combined with a heat sensitive release material and the drug material becomes ineffective after the release material is heated.
13. A metallic implant stent for delivery of a drug, comprising:

a body capable of being heated; and

a layer of drug material applied to the body, said drug material being effective while being heated.

14. A method of using a drug-coated or drug-loaded stent by heating the stent above a certain temperature at which drug activity in the tissue adjacent the stent is substantially enhanced and maintaining that temperature for a specified period of time.

15. An apparatus for delivery of a drug in a body comprising an implantable prosthetic member with the drug, the member being implanted in the body and controllably heated to elute the drug off of the member to treat the body, wherein the drug is operative when the member is heated.

16. The apparatus of claim 15, wherein heating of the implantable prosthetic member is invasive and is accomplished by applying a magnetic field over the body.

17. The apparatus of claim 16, wherein the elution of the drug off of the implantable prosthetic member is to treat prostate disease.

18. The apparatus of claim 16, wherein the elution of the drug off of the implantable prosthetic member is to treat diabetic disease.

19. The apparatus of claim 16, wherein the elution of the drug off of the implantable prosthetic member is to treat ophthalmic disease.

20. A method of delivering a drug in a body by controllably heating an implantable prosthetic member with the drug to elute the drug off of the member to treat the body, wherein the drug is operative when the member is heated.

21. An implantable device having at least one coated drug material capable of being heated inductively and delivering the drug material to a body when heated.

22. The device of claim 21, wherein frequency of inductive heat is below 1 MHz.